

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims

1. (currently amended) ~~A method for adapting the storage of program guide information for a plurality of programs in a receiver, said method comprising:~~
~~adapting the storage of program guide information for a plurality of programs in a receiver, wherein said adapting step includes:~~

determining whether a channel is included within a scan list comprising a plurality of channels available for viewing; and

deleting program guide information associated with said channel if said channel is not included within said scan list.

2. (original) The method of claim 1, wherein said deleting comprises:
determining whether program guide information scheduled for said identified channel is scheduled for use with another channel; and
deleting said program guide information if said program guide information is scheduled for use with no other channel.

3. (original) The method of claim 1, further comprising:
storing additional information for at least one program scheduled on an available channel.

4. (original) The method of claim 1, wherein at least one of said plurality of programs is broadcast from one of a satellite and a terrestrial broadcasting center.

5. (original) The method of claim 1, wherein each of said plurality of programs comprises at least one of a pre-recorded program, a live broadcast, and an advertisement.

6. (original) The method of claim 1, wherein said program guide information comprises Advanced Program Guide (APG) information.

7. (original) The method of claim 1, wherein said program guide information comprises a channel object containing program guide information for a channel, a schedule object containing program guide information for a program schedule, and program object containing program guide information for a program.

8. (original) The method of claim 7, wherein said step of deleting comprises:
determining whether a program object referenced by a selected channel object is also referenced by a channel object associated with a different channel;
deleting said referenced program object from memory if said program object is not referenced by another channel object; and
deleting said selected channel object from memory.

9. (original) The method of claim 7, wherein said step of deleting comprises:
determining whether a schedule object referenced by said selected channel object is also referenced by a channel object associated with a different channel;
deleting said referenced schedule object from memory if said schedule object is not referenced by another channel object; and
deleting said selected channel object from memory.

10. (currently amended) Apparatus comprising:
a tuner, for tuning a signal including program guide information;
a demodulator, for demodulating said tuned signal;
a decoder, for decoding said demodulated signal;
a memory, for storing decoded program guide information, a scan list of at least one channel ~~viewable on a program guide available for viewing~~, and instructions; and
a processor, upon executing said instructions, is configured to:

~~adapt the storage of the decoded program guide information in the memory by determining determine whether a channel is included within a the scan list comprising a plurality of channels available for viewing; and delete deleting program guide~~

information associated with said channel if said channel is not included within said scan list.

11. (original) The apparatus of claim 10, wherein said channel selected for removal is provided via an input device.

12. (original) The apparatus of claim 10, wherein said program guide information is deleted if said program guide information is scheduled for use with no other channel on said program guide.

13. (Currently Amended) The apparatus of claim 10, wherein said at least one of said plurality of programs is broadcast from one of a satellite and a terrestrial broadcasting center.

14. (original) The apparatus of claim 10, wherein each of said plurality of programs comprises at least one of a pre-recorded program, a live broadcast, and an advertisement.

15. (original) The apparatus of claim 10, wherein said program guide information comprises Advanced Program Guide (APG) information.

16. (currently amended) An apparatus ~~for adapting the storage of program guide information for a plurality of programs in a receiver, said apparatus comprising:~~

means for adapting the storage of program guide information for a plurality of programs in a receiver, wherein said means for adapting includes:

means for determining whether a channel is included within a scan list, said scan list comprising a plurality of channels available for viewing; and

means for deleting program guide information associated with said channel if said channel is not included within said scan list.

REMARKS

The Office Action mailed July 26, 2006 has been reviewed and carefully considered. No new matter has been added.

Claims 1, 10, and 16 have been amended. Claims 1-16 are pending.

Claims 1, 4-6, 10-11, and 13-16 stand rejected under 35 U.S.C. §102(b) as being anticipated by United States Patent No. 5,900,868 to Duhault et al. (hereinafter “Duhault”). Claims 2-3, 7-9, and 12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Duhault in view of United States Patent No. 5,652,613 to Lazarus et al. (hereinafter “Lazarus”).

It is respectfully asserted that none of the cited references teach or suggest the following steps/means recited in Claims 1 and 16:

adapting the storage of program guide information for a plurality of programs in a receiver, wherein said adapting step includes:

determining whether a channel is included within a scan list comprising a plurality of channels available for viewing; and

deleting program guide information associated with said channel if said channel is not included within said scan list

Moreover, it is respectfully asserted that none of the cited references teach or suggest the following limitations recited in Claim 10:

a memory, for storing decoded program guide information, a scan list of at least one channel available for viewing, and instructions; and

a processor, upon executing said instructions, is configured to:

adapt the storage of the decoded program guide information in the memory by determining whether a channel is included within the scan list and deleting program guide information associated with said channel if said channel is not included within said scan list.

In contrast, Duhault discloses “a method and apparatus that automatically scales the channel display area (i.e., thumbnails of the channels) based on the number of channels and displaying characteristics and that provides the user with options to customize the plurality of channels displayed in the multi-channel display is accomplished by determining whether all of

the channels in the user's customized list can be displayed within the given display area, which may be the full screen or a portion thereof. If all of the channels can be displayed in the given display area, another determination is made to determine the size of each of channel display areas (i.e., thumbnail). Having made this determination, visual representations of each channel in the user's customized list is displayed. While the multi-channel display is being presented, the user can select one of them for customized editing" (Duhault, Abstract). Further, Duhault discloses "[i]f, the plurality of channels will not fit within the display area, the process proceeds to step 118, where visual representations of a subset of the plurality of channels are displayed using the smallest acceptable channel display size (thumbnail), which may be 80x60 pixels. The process then proceeds to step 120, where a scrolling mechanism is provided to view the visual representations of the remaining channels of the plurality of channels" (col. 4, lines 49-56).

Thus, Duhault is not concerned with adapting the storage of the decoded program guide information stored in the memory as essentially recited in Claims 1, 10, and 16, but is instead concerned with being able to display a thumbnail of each channel in a user's customized list by either scaling the size of the thumbnails to fit them all or, when that is not possible, displaying as many thumbnails as possible using a smallest display size and providing a scrolling mechanism to enable scrolling through the remaining channels.

Moreover, while Duhault discloses that "the plurality of channels may be compiled into a list by the user or by automatic scanning of receivable channels" (Duhault, col. 4, lines 23-26), Duhault does not disclose "deleting program guide information associated with said channel if said channel is not included within said scan list", as essentially recited in Claims 1, 10 and 16.

It is to be appreciated that Lazarus does not cure the deficiencies of Duhault, and also does not disclose the above-recited limitations of Claims 1, 10, and 16.

For example, Lazarus discloses that "[t]he primary function of the present invention is to create free space in the memory used for schedule information storage" (Lazarus, col. 3, lines 46-48). Accordingly, Lazarus discloses "[a] television electronic program guide intelligent memory management system and method [that] automatically deletes the least valuable stored program information at that moment as free memory space is needed by the system. In advance of a program schedule update, the system executes a two-level memory 'housekeeping' operation in which the system first scans the memory to identify obsolete schedule information. If, after this sweep, there is insufficient memory available for the next update, the system performs a second-level memory 'triage' operation wherein schedule information is

automatically prioritized in accordance with pre-defined rules for accessing the current value of the information to each viewer based on program air time, channel and other variables relating to program utility. The system then deletes schedule information in ascending order of value, starting with the least valuable information, and continues until enough space is available in memory to store the schedule update" (Lazarus, Abstract).

Thus, while Claims 1, 10, and 16 essentially recite deleting program guide information associated with said channel if said channel is not included within said scan list, Lazarus discloses the deletion of schedule information based on an elaborate scheme requiring prioritizing schedule information, defining rules for accessing the current (priority) value of such information, and an evaluation of multiple variables in order to assign such priority value. However the variables disclosed by Lazarus are not used to delete information *per se* (as is essentially the use of the scan list recited in Claims 1, 10, and 16), but rather are simply used to assign a priority to a particular piece of schedule information.

Therefore, in sum, neither Duhault nor Lazarus, taken singly or in combination, disclose deleting program guide information associated with said channel if said channel is not included within said scan list as essentially recited in Claims 1, 10, and 16.

A reference cited against a claim under 35 U.S.C. §102 must disclose each and every limitation of the rejected claim. Further, “[t]o establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art” (MPEP §2143.03, citing *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)). Moreover, “[i]f an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious” (MPEP §2143.03, citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)).

Accordingly, independent Claims 1, 10, and 16 are patentably distinct and non-obvious over the cited references for at least the reasons set forth above.

Claims 2-9 depend from Claim 1 or a claim which itself is dependent from Claim 1 and, thus, includes all the elements of Claim 1. Claims 11-15 depend from Claim 10 and, thus, includes all the elements of Claim 7. Accordingly, Claims 2-9 and 11-15 are patentably distinct and non-obvious over the cited reference for at least the reasons set forth above with respect to Claims 1 and 10, respectively.

Moreover, said dependent claims include patentable subject matter in and of themselves and are, thus, patentable distinct and non-obvious over the cited references in their own right.

For example, none of the cited references teach or suggest “wherein said step of deleting comprises: determining whether a program object referenced by a selected channel object is also referenced by a channel object associated with a different channel; deleting said referenced program object from memory if said program object is not referenced by another channel object; and deleting said selected channel object from memory”, as recited in Claim 8.

Moreover, none of the cited references teach or suggest “wherein said step of deleting comprises: determining whether a schedule object referenced by said selected channel object is also referenced by a channel object associated with a different channel; deleting said referenced schedule object from memory if said schedule object is not referenced by another channel object; and deleting said selected channel object from memory”, as recited in Claim 9.

It is to be noted that Claim 7, from which Claims 8 and 9 depend, recites “wherein said program guide information comprises a channel object containing program guide information for a channel, a schedule object containing program guide information for a program schedule, and program object containing program guide information for a program”.

The Examiner has cited column 4, lines 46-54 of Lazarus as disclosing the preceding limitations of Claim 8, summarizing that “Lazarus checks to see if a program object is still scheduled to be run in the future on any channels in the EPG, if no channel in the EPG is running the program, the program object is deleted from the EPG data base” (Office Action, p. 4). As is clearly evident from simply the Examiner’s summary statement of the cited section, the program object referenced therein is expired. This is further evident from a sentence in this cited portion of Lazarus that discloses that “[t]he find and delete routine 120 proceeds in this manner until the entire program schedule database has been scanned and purged of expired records” (Lazarus, col. 4, lines 48-50).

The Examiner has cited column 4, lines 50-54 of Lazarus as disclosing the preceding limitations of Claim 9, summarizing “a schedule object contains program information for at least one program and Lazarus discloses deleting program information if said program

information is not set to be run on any channels in the foreseeable future" (Office Action, p. 5).

Column 4, line 31 through line 54 of Lazarus, which includes the cited portion by the Examiner, is reproduced as follows:

[A] program schedule record includes a calendar_date, program start_time and duration field for each scheduled showing of the program. For program showing which start on one day and end on another, the calendar_date field is set to the date on which the program ends. Where the calendar_date field for a showing is greater than the current date, the find and delete routine 120 retains the data associated with the showing, as the record corresponds to future programming. Where the calendar_date field is less than the current date, the program record corresponds to expired programming and the data associated with the showing is therefore deleted. If the calendar_date is equal to the current date, the system adds the program start_time and duration fields together and compares the sum to the current time. Data for each showing are then deleted or retained depending on the outcome of the comparison. The find and delete routine 120 proceeds in this manner until the entire program schedule database has been scanned and purged of expired records. Where all of the showings of particular program are expired, the system deletes the entire record corresponding to that program (which, as will be discussed later, contains other information about the program).

In contrast to the preceding portion of Lazarus, Claim 8 is not deleting expired information per se, but rather is deleting a program object for a selected channel object not included within the scan list, with the caveat that the program object is not deleted if the program object pertains to a different channel object. Such a situation may occur where, for example, as disclosed in the Applicants' specification "program objects 506 may be shared by multiple schedule objects and also be associated with channel objects 502" (Applicants' specification, p. 10, lines 1-3).

Moreover, in contrast to the preceding portion of Lazarus, Claim 9 is not deleting expired information per se, but rather is deleting a schedule object for a selected channel object not included within the scan list, with the caveat that the schedule object is not deleted if the schedule object pertains to a different channel object. Such a situation may occur where, for example, as disclosed in the Applicants' specification "schedule objects may be shared by multiple channel objects" (Applicants' specification, p. 9, lines 24-25).

Accordingly, the approach disclosed for deleting information in the cited section of Lazarus differs from that recited in Claims 8 and 9. It should be noted that the cited section of Lazarus pertains to the first level of his two-level memory housekeeping process. For example, according to the cited section of Lazarus, information is deleted based on, *inter alia*, a comparison of calendar_date versus current date. In contrast, Claim 8 deletes a program object for a selected channel object not included within the scan list, unless that program object pertains to a different channel object, and Claim 9 deletes a schedule object for a selected channel object not included within the scan list, unless that schedule object pertains to a different channel object. That is, Lazarus makes a determination to delete, in the cited section, which relates to the first level of his two-level memory housekeeping operation, solely based on calendar_date while the present invention makes a determination to delete based on inclusion/exclusion in/from the scan list and associations between objects, such as whether or not a selected channel object referencing the program/schedule object is included within the scan list and whether or not the program/schedule object is references by another channel object.

Moreover, assuming arguendo that Lazarus did disclose a scan list as one of the many variables disclosed therein with respect to the second level of his two-level memory housekeeping operation, such scan list would be used in accordance with the teachings of Lazarus to assign a priority value to a particular schedule object and not to determine whether the particular object should be deleted/retained without more.

Accordingly, Lazarus does not disclose the preceding limitations of Claims 8 and 9. Duhault does not cure the deficiencies of Lazarus with respect to Claims 8 and 9, and is completely silent with respect to the limitations of Claims 8 and 9. Accordingly, none of the cited references, either taken singly or in combination, teach or suggest the above-recited limitations of Claims 8 and 9.

Accordingly, reconsideration of the rejections is respectfully requested.